been relieved or lessened. There has been no indication in the character or frequency of the pulse, nor in the general condition of the patient, that a specific for the toxæmia had been administered. During the first three months of 1894 the death-rate at this hospital without antitoxin was 32 per cent.; during the corresponding months of 1895, with antitoxin treatment, the death-rate was 28 per cent., and this, too, when diphtheria was far milder than it was one year previous. The serum used in the early part of the antitoxin treatment was so weak that it was stated that but little could be expected of it. The record showed that the cases treated with the weaker serum did better than those which were treated with the stronger serum, and that those who had the smaller dose of serum did better than those who had a larger dose. In fact, a careful study of the individual cases will show that there is no relation between the antitoxin treatment and the recoveries. As to the untoward or unfavorable effects of the antitoxin treatment, it was found that babies who presented but slight clinical evidence of diphtheria after receiving antitoxin may develop an antitoxin infection, of which the symptoms may gradually subside, leaving them emaciated and extremely anæmic, or there may be a fluctuating temperature ranging from 99° to 106.8° F., and existing for days together. Horse-serum dissolves human blood-corpuscles, and thereby produces new elements of decomposition. The condition of these babies was one of antitoxin septicæmia, brought about by the influence of the antitoxin in the blood. Further evidence of septicæmia is to be found in occasional suppurations showing a temperature-range such as has not been seen since the introduction of aseptic surgery. In some cases of death the necropsy has shown that the patients had recovered from the diphtheria, but had died from pneumonia; this pneumonia is that of septicæmia, and this in turn was induced by antitoxin. Another danger is that of nephritis, which can be fatal, as was shown by Lennox Browne (six out of eight cases treated by antitoxin) and Benda (thirty-three out of thirty-nine deaths from the antitoxin treatment). Further dangers may arise from its action upon the nervous system, and varies according to individual susceptibility; death may speedily ensue. The use of the antitoxin may be immediately dangerous to life through its influence on the kidneys and on the nervous system, and, remotely, through its influence on the blood.—*New York Medical Record*, 1895, vol. xlvii. p. 501.

THE TREATMENT OF DIPHTHERIA.

DR. D. BRADEN KYLE states that the infected mucous membrane surfaces should be frequently and thoroughly cleansed. Loeffler has been able with his toluol solution to obtain as good results as with the serum treatment. The solution consists of alcohol 60, toluol 36, liquor ferri sesquichloridi 4, which is highly germicidal in that it will destroy pure cultures of the Klebs-Loeffler bacillus and also of the germs closely allied to this disease, especially the streptococcus, when exposed to it for only a few seconds. The infected areas are swabbed with this solution every two to four hours, the membrane readily dissolving. Equally good results have been obtained by substituting creolin for the iron, and menthol can be added to relieve the pain.—*Therapeutic Gazette*, 1895, No. 4, p. 225.

THE TREATMENT OF LUPUS BY CANTHARIDIN.

DR. O. LIEBRICH states that a remedy for tuberculosis must be something other than that which destroys tubercle bacilli alone, but must have as well some effect upon the vital forces. After presenting the peculiar action of the drug and showing that medicinal doses, even if continued for two and one-half years (case cited), will not give rise to any pathological changes in the kidneys, he points out its beneficial effects upon general symptoms. Cantharidin can be given internally as a sodium cantharidinate or as the pure drug dissolved in tincture of orange-peel (1 to 5000), or by hypodermatic injection. From the results of his treatment he concludes that the dogma that lupus vulgaris cannot be cured without cicatricial tissue is untrue, and demonstrates that this drug has a curative action.—*Therapeutische Monatshefte*, 1895, Heft 4, S. 167.

LOSOPHAN IN DERMATOLOGY.

DR. I. ABBOTT CANTRELL has experimented with this drug, which is tri-iodocresol, and is produced by the action of iodine upon m-oxytoluic acid, in the presence of an alkali. It was used as an ointment in from 2 to 5 per cent. with petrolatum; as dusting-powder with starch, 1 to 15 per cent.; in solution in alcohol and water, 1 to 5 per cent. It was used in 111 cases: eczema, 43; scabies, 23; pediculosis vestimentorum, 5; ringworm, 16; impetigo contagiosa, 8; alopecia areata, 2; dermatitis venenata, 2; furuncle, 2; and seborrhœa, 2 cases. From this experience he concludes: 1. It has proved to be entirely inefficacious in almost every disease of the skin. 2. Tinea sycosis was cured in one instance, but after two months' treatment. 3. It possibly may be beneficial in acne. 4. It is a waste of time for any one to make use of it in treating diseases of the skin.—*Therapeutic Gazette*, 1895, No. 4, p. 221.

MALT EXTRACT AND DIASTASE.

PROF. JOHN M. FRANCIS states that malt extract contains not starch but dextrin, soluble starch, and maltose, small quantities of albumin, gum, and inorganic salts, and, more important than all, the portion of diastase which was not consumed by the starch or destroyed in the process of evaporation. If it is marketed in the liquid form a preservative is added, usually alcohol, sometimes glycerin, which does not serve the purpose so well, and in the cheaper forms, borax, boric acid, and salicylic acid. No matter what precautions are taken they gradually but surely lose their diastasic activity. These extracts have two functions; to afford a supply of amylaceous food for a weak and diseased stomach, and in a predigested condition, ready to be assimilated without the effort of physiological preparation—in this *rôle* its field of usefulness is very broad. Second, we may employ malt extract to afford an extra supply of diastase for the digestion of food which has already been ingested, and which the stomach seems unable to dispose of in the proper manner. Nearly two-thirds of our food consists of starches, and we probably overlook the greater source of digestive troubles in our efforts to assure the disintegration of the fats and proteids. If, then, there is frequent need of an extra supply of diastase, it naturally follows that the best malt extract is the one containing the most available diastase. To meet this indication it would be well to have a diastase pure and simple—one which can be dispensed in pills, tablets, or powders; which occupies a small space; which will retain its activity in any climate; which is concentrated enough that in moderate dose it will materially aid in the digestion of the bread, cakes, and pastry which are usually presented in such a gummy, glutinous, or compacted mass, or so permeated by grease that the action of the diastasic fluid is greatly retarded. That this is possible has been shown by the preparation of diastase, in an experimental way, of which one part will dissolve 50,000 parts of starch. Considering the large number of sources of diastase there is likely to be a demand for something more powerful than the ordinary malt extract, namely, a pure diastase meeting the requirements noted above. —*Bulletin of Pharmacy*, 1895, No. 5, p. 200.

GUAIACOL.

M. E. BLAISE administers this drug in daily doses of from seven to twenty grains with benefit in pulmonary tuberculosis. Those patients who acquire an unconquerable dislike for cod-liver oil may be able to take this remedy if guaiacol is added to it, which also greatly aids its absorption. If dissolved in a sterilized bland oil, it may be given hypodermatically in from 20 to 50 per cent. solutions. In general it is well borne by the stomach; this tolerance being explained by its anæsthetic properties, which have been utilized in laryngology. Its valuable antipyretic effects when used externally are well known. It is eliminated by the kidneys, commencing very shortly after its administration, reaching its maximum between the second and fourth hour, and after twenty-four hours the urine contains no trace of the drug. It is excreted as potassium guaiacol-sulphonate, about 55 per cent. of the total amount ingested. Not only is it an antipyretic when locally applied, but it is also analgesic in acute or chronic rheumatism, intercostal pain, neuralgias, and it has been used in pleurisy with tincture of iodine (3 to 25); in painful orchitis as an ointment with vaseline (3 or 5 to 30) it has given good results. The best application as an antithermic is with equal parts of anhydrous glycerin. The synthetic guaiacol is preferred to that of fractional distillation.—*Les Nouveau Remèdes*, 1895, No. 9, p. 201.

THE HYGIENE OF SANATORIA FOR PATIENTS SUFFERING FROM PHTHISIS.

DR. NETTER formulates the following rules which are in part applicable to those dwelling at home: The residence should be so situated that it is not exposed to the prevailing winds. About the house should be a zone of isolation devoted to a park and to cultivated land, necessary as well for the patient, who should be in the open air, which is the basis of the treatment of tuberculosis. Expectoration should be only into cups containing a certain quantity of water. These cups should be disinfected every day. There should be an oven under the charge of a skilled and conscientious attendant. The linen should be delivered to the laundry only after sterilization in the oven. The room should be disinfected before receiving a new occupant, and to facilitate this the floor and walls should be so constructed that they can be washed and brushed with antiseptic solutions; the floors varnished, or, better, covered with linoleum; the walls painted in oil. The dejecta should be disinfected.—*Journal des Praticiens*, 1895, No. 19, p. 292.

THE TREATMENT OF TUBERCULOSIS.

DR. FEDOR SCHMEY notes the rarity, on necropsy, of an uncomplicated tubercle bacillus infection, and points out the inefficacy of tuberculin in these cases of mixed infection. He makes use of gelatin capsules, each containing five grains of balsam of Peru and three grains of guaiacol, three capsules three times daily during the meal, and this number is to be increased until twenty capsules *per diem* are taken. It is necessary to take as many as a thousand capsules. In addition to this it is well to inhale by means of a spray the following: Balsam of Peru, 10; wine spirit, 30; distilled water, 200, each day. The alcohol is not only necessary, but as well useful in diminishing cough. For bone, joint, and skin tuberculosis subcutaneous injections of salts of cinnamic acid, particularly the sodium, have given good results, and apparently have not given rise to any symptoms of renal irritation. These observations made from a surgical standpoint tend to show the value of balsam of Peru, for the latter contains cinnamic acid. It is claimed that not only is the balsam of Peru useful against a mixed infection, but as well has a direct specific action upon the tubercle bacilli.—*Therapeutische Monatshefte*, 1895, Heft 5, S. 244.

THE TREATMENT OF TYPHOID FEVER.

DR. WM. EWART considers that the treatment is concerned with three great objects: (1) the patient, *i. e.*, the preservation of vitality and nutrition. (2) The disease itself, *i. e.*, the removal of the cause. (3) The effects of the disease, *i. e.*, the relief of the symptoms. Under the first heading, while paying due regard to the mechanical danger of too much movement of the diseased bowel, it is essential not to forget that it is also capable of being overloaded and strained by excessive bulk of fluid, especially if this should lead to flatulency. Above all, a well-supported nervous system and well-nourished tissues are the best defences against necrosis and against the danger of perforation. The importance of substantial support and of preservation of the gastric and upper intestinal functions renders the early administration of alcohol undesirable. It is worth considering whether we may not at suitable periods combine a fairly liberal portion of carbohydrate foods, which leave no appreciable residue, with milk. During the first ten to fourteen days there is little reason for abstaining from the lighter foods. Some of the principles contained in them may, after this time, be continued in fluid form, as fruit juices, vegetable broths. In the healing of ulcerations, especially along the alimentary tract, assistance is derived from a fresh vegetable diet. In the early stages of convalescence, articles of diet can be so selected that they will afford considerable nutrition without loading the bowel with much residue, as thin arrowroot, chocolate, honey, yolk of egg, maltine. Among the indications for treatment attention to the liver is important. In enteric fever it is practically immobilized for prolonged periods and deprived